

Nutrition for Cancer Prevention

Kris S. Calderon, PhD, CHES

Health Education Administrator

Kennedy Space Center/Cape Canaveral Air Force Station

Cancer Incidence and Risk

- As of 2002, cancer is the second leading cause of death in the United States
- Over half a million people die in the U.S. from cancers
- 40-70% of all cancers are caused by the typical American diet, lack of physical activity, and obesity
- Cancer is mostly a preventable disease
- Excess body fat is associated with increased risk of certain cancers: breast, colon, endometrial, and prostate

A Whole Foods Diet

- High in whole grains and fiber
- High fruits and veggies
- Moderate in low-fat dairy
- Moderate in nuts and legumes
- Moderate in fish, poultry, and eggs
- Low in “bad” fats, moderate in “good fats”
- Low or sparingly in beef and pork and refined carbohydrates and sugars

Whole Grains

- Complex carbohydrates: starch or fiber
- Simple carbohydrates: sugars
- Whole grains: complex, fibrous carbohydrates

Why whole grains?

- Displaces fats and sweets
- Delay cholesterol absorption
- Absorbs water – promotes fullness
- Reduce your risk of many chronic diseases

FATS

- *Worst* : Trans Fats

- partially hydrogenated vegetable oil, margarine, shortening, deep fried foods, French fries, most bakery goods

- *Bad*: Saturated Fat

- Cheese, whole milk, dark chocolate, butter, ice cream, fatty meats, coconut milk, lard

- *Better & Best*: Poly & Monounsaturated

- Oils: Olive, canola, safflower, corn, sunflower, soybean
- Fats: peanut butter, nuts, avocados, sesame & pumpkin seeds, fish (omega-3)

Phytochemicals and Oxidation

- It is estimated that the DNA material in every cell of the body is attacked by 10,000 free radicals every single day
- Phytochemicals (called antioxidants) defend against free radicals by stopping oxidation; providing protection against disease
- One serving of vegetables may contain more than 100 different phytochemicals
- People who regularly consume fruits and vegetables in addition to whole grains and nuts will have better health than those who do not

Benefits of Fruits and Vegetables

- A review of over 200 studies provide evidence that consumption of fruits and vegetables can help protect against cancers of the stomach, esophagus, lung, oral cavity, pharynx, endometrium, pancreas, and colon
- People who consumed the most fruits and vegetables compared to those that ate the least, had half the cancer risk
- 30,000 women were followed for 4 years: a healthy diet was related to a 22% reduction in new cancers and significant reduction in cancer death

Fruits and Vegetables

- They are fat free and low in calories!
- They have fiber!
- They have phytochemicals called antioxidants that can reduce your cancer risk!
- Fruits: 2-3 servings/day
- Vegetables: as many as you want!
- Eat the skin!

Nuts and Legumes

- Peanuts, walnuts, and almonds have good fats that can lower cholesterol
 - Watch serving size: $\frac{1}{4}$ cup = 1 serving (170 kcal)
 - Good source of fiber and some protein
- Beans
 - Fat free
 - Great source of fiber and protein

Best Protein Sources

■ Fish

- Cold water fish have high omega-3 fatty acids: salmon, tuna, mackerel

■ Chicken/Turkey

- Remove the fat and skin; white meat is leaner

■ Beef and Pork

- Most can be high in saturated if not careful!
- Should limit amount you eat
- Choose only very lean cuts of beef and pork if having

■ **Serving size of meat is palm of your hand!**

Dairy

- Non-fat and low-fat dairy has been linked to maintaining weight loss and decreasing blood pressure
- Best Sources:
 - Fat free/1% milk
 - Fat free/low-fat yogurt
 - Fat free/low-fat cottage cheese
 - Fat free/lower sugar ice cream & frozen yogurt
- Potential bad source: Cheese!
 - Serving size of cheese is the size of your thumb!
 - Cheese can have 4-12 grams of fat per serving!

Tips for eating healthy foods

- Eat fruit with your breakfast every morning
- Add more vegetables to your meals until veggies become the focus of the meal
- Try vegetable soup – add lots of veggies and let it cook all day
- Serve slices of fresh fruit as an appetizer to start a meal; also a great dessert
- Try different ways to prepare veggies – roasted, cooked, steamed, stir-fry

Exercise!

- Men and women who exercise regularly have a 30-40% reduction in the risk of colon cancer
- 26 studies show that regular exercisers have a 30-40% lower risk of getting breast cancer

Resources

- Aldana, S. G. (2005). The Culprit and the Cure. Maple Mountain Press: Mapleton, UT. ISBN: 0-9758828-0-5
- KSC N.E.W.S. website
- www.hsph.harvard.edu/nutritionsource